***Halifax County Schools***

***2016-2017 School Year***

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| Domain | Grade 6 |
| Ratios and Proportional Relationships | 12–17% |
| The Number System | 27–32% |
| Expressions and Equations | 27–32% |
| Functions | NA |
| Geometry | 12–17% |
| Statistics and Probability | 7–12% |
| Total | **100%** |

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| Halifax County Schools – Mathematics – Grade 6 Curriculum Guide | | | | | | |
| **Unit One: The Number System**  **The Big Idea: Do you possess number sense?**  **Sixth Week Project: Create Your Own Math Game** | | | | | | |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered (Lessons to be taught)** | **Learning Target**  **“I CAN”** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.NS.5**  Understand that positive and negative numbers are used together to describe quantities having opposite directions or values, use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 ineach situation. | What real-life situations involve integers? | Representing Integers  Real-World Connections  Situational Key Words (Example: Negative Key words: below, reduced, descended, back, withdrew. Positive key words: up, above, ascended, scored, and gained). | I CAN write an integer to describe a situation.  I CAN identify key words in Integer situations.  I CAN create a chart to display positive and negative key words. | Content  Integer  Opposite  Positive  Negative  Quantities  Values  Zero Pair  Academic  Write  Analyze  Interpret  Model  Describe  Represent  Explain  Effect | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  Invite a representative from the State Employees Credit Union to discuss the Fat Cat Account for kids. This will enhance student concepts of bank deposits and withdrawals (Integers).  Create a chart to display the temperature of 3 cities for 5 consecutive days. Record the change in temperature by writing an integer to describe each situation. | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket  Learning Log |
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| **6.NS.6**  Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.   1. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g.,–(–3) = 3, and that 0 is its own opposite. 2. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. 3. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane. | What is the relationship between integers and the coordinate plane? | Vertical and Horizontal Number lines   1. Introduction to the Coordinate Plane 2. Opposites 3. Rational Numbers on the Coordinate Plane | I CAN identify integers on a horizontal and a vertical number line.  I CAN combine a vertical and horizontal number line to form a coordinate plane.  I can recognize opposites on the number line.  I CAN graph rational numbers on the number line. | **Content**  Rational  Coordinate Plane  X-Axis  Y-Axis  Origin  X-Coordinate  Y-Coordinate  Ordered Pair  Diagram  Points  Quadrants  Reflection  **Academic**  Understand  Extend  Represent  Recognize  Indicate  Find  Position | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  **Activities**  Create a coordinate plane on the classroom floor. Give students a starting ordered pair. Call out integer situations and students must move according. After 3 moves students are to record their order pair. Check for accuracy.  **Hot Quadrants**  Group students in fours. Create several coordinate planes on a shower curtain. Give one to each group. Teacher will call out an ordered pair and students must stand in the appropriate quadrant (30 seconds to move). If students stand in the wrong quadrant, they are out. The game continues until there is a winner from each group (or one winner from the whole group).  **Ballroom Integers**  Group students in pairs. Teacher will call out ordered pairs. Couples must dance accordingly. For example: Teacher calls out (3, -2). Students must follow the direction of the leading dancer. Couples will move 3 steps right and two steps back while the ballroom music plays. | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket  Learning Log |
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| **6.NS.7**  Understand ordering and absolute value of rational numbers.   1. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. 2. Write, interpret, and explain statements of order for rational numbers in real-world contexts. 3. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. | In what ways do we use Absolute Value in our everyday living? | Comparing and Ordering Integers and Rational Numbers on the Number Line.  Statements of Comparison  Absolute Value  Comparing with Absolute Value | I CAN compare integers on the number line.  I CAN explain statements of comparison using <, >, and =.  I CAN understand the Absolute Value of integers and rational numbers.  I CAN compare Absolute Value (given statements). | **Content**  Absolute Value  Distance  Inequality  Position  Quantity  Magnitude  **Academic**  Understand  Interpret  Write  Explain  Model  Draw | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  **Patterns in Algebra** <http://www.teachervision.fen.com/tv/printables/Math_6_PA_9-2.pdf>  (dropbox)  Are You Absolutely Sure: Absolute Values (Dropbox) | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket  Learning Log |
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| **6.NS.8**  Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate. | What is the relationship between the coordinate plane and absolute value? | Distance on the Coordinate Plane  Real-World Connections | I CAN explain distance in units on the coordinate plane. | **Content**  Graph  Quadrant  Distance  Absolute Value  **Academic**  Solve  Graph  Include  Find  Explain | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  Enrichment: Distance on the Coordinate Plane <http://www.gameclassroom.com/game/45719-3424/x-coordinates/distance-coordinate-plane>  Billy Bug and His All New Quest for Grub <http://resources.oswego.org/games/BillyBug2/bug2.html> | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket  Learning Log |
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| **6.NS.4**  Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. | What real-life situations involve finding the greatest common factor of numbers? | Finding the Greatest Common Factor of Whole Numbers  Finding the Least Common Multiple of Whole Numbers  Using the Distributive Property | I CAN find the Greatest Common Factor of whole numbers less than or equal to 100.  I can find the Least Common Multiple of whole numbers less than or equal to 100.  I CAN find the prime factors of numbers as a strategy for locating the GCF. | **Content**  GCF  LCM  Prime  Composite  Less Than  Greater Than  Distributive  Sum  Multiple  Factor  **Academic**  Find  Use  Express  Model  Explain  Determine | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  **Real-World GCF/LCM**  <http://www.ixl.com/math/grade-6/greatest-common-factor-word-problems>  **Multiples**  <http://www.mathplayground.com/multiples.html> | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket |
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| **6.NS.2**  Fluently divide multi-digit numbers using the standard algorithm. | How will knowing how to divide whole numbers using the standard algorithm help us in the real-world? | Dividing Whole Numbers Using the Standard Algorithm | I CAN apply the DMSB method to divide whole numbers.  I CAN identify the dividend and the divisor. | **Content**  Algorithm  Dividend  Divisor  Quotient  Factors  Multiples  **Academic**  Compute  Model  Explain  Display  Understand  Critique | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  Power Football <http://www.funbrain.com/cgi-bin/fb.cgi?A1=start4&A2=Easy&ALG=Yes&INSTRUCTS=1>  Double Division  <http://www.doubledivision.org/>  Mental Math Game  <http://www.mathplayground.com/division02.html> | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket |
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| **6.NS.3**  Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation. | What real-life situations or careers involve working with decimals? | Adding Decimals (Standard Algorithm)  Subtracting Decimals (Standard Algorithm)  Multiplying Decimals (Standard Algorithm)  Dividing Decimals  (Standard Algorithm) | I CAN add, subtract, multiply, and divide decimals.  I CAN explain how decimals are used in the real-world. | **Content**  Sum  Difference  Product  Quotient  Decimal  Dividend  Divisor  **Academic**  Understand  Explain  Justify  Model  Create  Define | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  **Real-World Decimals:**  Gather shopping ads from various retail stores. Give students a budget. Students are to spend as much money as possible without exceeding the budget. Students must record the subtotal, tax, and total of the order. Students must apply all funds and record how much money is left after purchase.  **Date Night**  Give students a restaurant menu. Students are to select an appetizer, an entrée, a dessert, and a beverage. Students must determine the cost of the final bill (food total, tax, and tip). | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket |
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| **6.NS.1**  Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. | How are fractions used in the real-world? | Dividing Fractions | I CAN divide fractions.  I CAN solve word problems involving division of fractions by fractions. | **Content**  Fractions  Divide  Quotient  Equation  Multiplication  Inverse  Reciprocal  **Academic**  Infer  Interpret  Analyze  Perform  Create  Explain  Identify  Explore  Apply | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  Find Grammy <http://www.visualfractions.com/FindGrammy/findgrammy.html>  Three Ways to Divide <http://www.webmath.com/divfract.html>  More Practice  <http://www.mathplayground.com/fractions_div.html> | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket |

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| **Unit Two: Expressions and Equations**  **The Big Idea: Can You Express Yourself with Algebra?**  **Sixth Week Project: Career Day** (Choose a career that involves working with Algebra. Conduct research to determine the salary, job description, hours on the job, dress code, and education needed. Write four Algebra word problems involving your career). | | | | | | |
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| **6.EE.1**  Write and evaluate numerical expressions involving whole-number exponents. | What real-life situations involve using order of operations? | Order of Operations  Evaluating Numerical Expressions  Mathematical Symbols | I CAN evaluate numerical expressions.  I CAN apply the order of operations to solve problems.  I CAN identify mathematical symbols. | **Content**  Numerical Expression  Exponents  Parentheses  O of O  Base  Decimal  Fraction  Value  Evaluate  Variable  Braces  Brackets  **Academic**  Apply  Extend  Understand  Communicate  Discuss  Reason  Demonstrate  Write  Evaluate  Represent | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  **Flintstones**  <http://www.themathlab.com/Pre-Algebra/order%20of%20operations/orderof.htm>  **Order of Operations Game** <http://mrnussbaum.com/orderops/>  **Math Goodies**  <http://www.mathgoodies.com/lessons/vol7/order_operations.html> | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket  Learning Log |
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| **6.EE.2**  Write, read, and evaluate expressions in which letters stand for numbers.   1. Write expressions that record operations with numbers and with letters standing for numbers. 2. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. 3. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world word problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). | What real-life situations involve variables and expressions?  Why is it important to know how to write and read expressions?  What real-life situations will allow you to use formulas to solve problems? | Difference Between Algebraic and Numerical Expressions  Evaluating Algebraic Expressions  Writing Algebraic Expressions  Identifying Expressions Using Math Terms  Use of Variables in Formulas | I CAN write algebraic expressions.  I CAN evaluate algebraic expressions.  I CAN identify parts of expressions using Math terms.  I CAN solve problems using formulas that contain variables. | **Content**  exponents base numerical expressions algebraic expressions  evaluate  sum  term  product factor quantity  quotient  coefficient constant  like terms equivalent expressions variables  **Academic**  Analyze  Apply  Write  Evaluate  Fluent/Fluency  Distinguish comparisons  Flexible | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  **Balancing Equation (**Video, Lesson, and Activities) <http://www.learnalberta.ca/content/mesg/html/math6web/index.html?page=lessons&lesson=m6lessonshell11.swf>  **Writing Expressions**  [http://www.math.com/school/subject2/lessons/S2U1L3GL.html#sm1](http://www.math.com/school/subject2/lessons/S2U1L3GL.html%23sm1) | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket  Learning Log |
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| **6.EE.3**  Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y. | What real-life situation or career reminds you of the distributive property? | Equivalent Equations  Applying the Distributive Property | I CAN identify equivalent expressions.  I CAN use the distributive property to write equivalent expressions. | **Content**  exponents  base  numerical expressions algebraic expressions  evaluate  sum  term  product  factor  quantity  quotient  coefficient constant  like terms equivalent expressions variables  **Academic**  Analyze  Apply  Write  Evaluate  Fluent/Fluency  Distinguish comparisons  Flexible | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  **Distributive Property Video** <http://flash.learning.com/ahamath-demo/The-Distributive-Property-Lesson/SCORMDriver/indexAPI.html>  **Equivalent True/False**  <http://www.graniteschools.org/depart/teachinglearning/curriculuminstruction/math/elementarymathematics/K6%20Support%20Documents/6th%20Grade%20Support/Equivalent%20Expressions.pdf>  **Equivalent Video**  <http://www.nutshellmath.com/textbooks_glossary_demos/glossary_content/equivalent_expressions_and_equations.html> | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket  Learning Log |
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| **6.EE.4**  Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for. | What strategy do you use to determine whether or not expressions are equivalent? | Equivalent Expressions With the Same Number | I CAN identify like terms.  I CAN successfully combine like terms. | **Content**  Expression  Quantity  Like Term  Equation  Coefficient  Variable  Exponent  Substitution  **Academic**  Analyze  Apply  Write  Evaluate  Fluent/Fluency  Distinguish comparisons  Flexible | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  **Equivalent Expressions with Division** <http://www.ehow.com/video_12238113_make-equivalent-expressions-using-division.html>  **Lesson Plan and activities** <http://www.uen.org/Lessonplan/preview.cgi?LPid=23478> | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket  Learning Log |
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| **6.EE.5**  Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true. | How are equations and inequalities used to handle real-life situations? | Solving Equations  Solving Inequality | I CAN solve equations.  I CAN solve inequalities.  I CAN identify which values will make the equation/inequality true. | **Concept**  Inequality  Included  Not Included  Graph  Set  Function  Substitution  Inverse  Operation  **Academic**  Solve  Eliminate  Explain  Model  Graph  Determine  Show  Understand  Evaluate | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  **On-Step Inequalities** <http://www.ixl.com/math/grade-8/solve-one-step-linear-inequalities>  **Patterns in Algebra**  <http://www.teachervision.fen.com/tv/printables/Math_6_PA_3-2.pdf>  **Old School Equations**  <http://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/old-school-equations/v/algebra--linear-equations-4> | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket  Learning Log |
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| **6.EE.6**  Use variables to represent numbers and write expressions when  solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. | How can real-life scenarios help use write expressions? | Writing Expressions  (for given scenarios). | I CANwrite expressions to represent various real-world situations.  I CAN connect writing expressions with story problems. | **Content**  exponents  base  numerical expressions algebraic expressions  evaluate  sum  term  product  factor  quantity  quotient  coefficient constant  like terms equivalent expressions variables  **Academic**  Analyze  Apply  Write  Evaluate  Fluent/Fluency  Distinguish comparisons  Flexible | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  **Tutorials, Examples, Problems** [**http://www.wtamu.edu/academic/anns/mps/math/mathlab/beg\_algebra/beg\_alg\_tut4\_vari.htm**](http://www.wtamu.edu/academic/anns/mps/math/mathlab/beg_algebra/beg_alg_tut4_vari.htm)  **Taming Word Problems**  [**http://www.internet4classrooms.com/word\_problems\_quest.htm**](http://www.internet4classrooms.com/word_problems_quest.htm)  **Writing Expressions**  [**http://www.mathgoodies.com/lessons/vol7/expressions.html**](http://www.mathgoodies.com/lessons/vol7/expressions.html) | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket  Learning Log |
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| **6.EE.7**  Solve real-world and  mathematical problems by writing and solving equations of the form *x + p = q* and *px = q* for cases in which *p,q* and *x* are all nonnegative rational  numbers. | What strategies do you use to write equations that correspond with word problems? | Equations with Unknown Variable Values | I CAN solve equations that include variables with unknown values.  I CAN write equations from real-world problems. | **Content**  numerical expressions algebraic expressions  evaluate  sum  term  product  factor  quantity  quotient  coefficient constant  like terms equivalent expressions variables  **Academic**  Analyze  Apply  Write  Evaluate  Fluent/Fluency  Distinguish comparisons  Flexible  Understand | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  **Stanley Cup Playoffs**  <http://www.yummymath.com/2013/longest-nhl-matches-in-history/>  Extended Product Warranties  <http://www.mathalicious.com/lesson/an-applecare-a-day/> | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket  Learning Log |
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| **6.EE.8**  Write an inequality of the form *x* > *c* or *x* < *c* to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form *x* > *c* or *x* < *c* have infinitely many solutions; represent solutions of such inequalities on number line diagrams. | What real-life situations involve the use of inequalities? | Write Inequalities to represent real-life situations.  Inequalities on the Number Line. | I CAN write inequalities to represent real-  world and mathematical situations.  I CAN use the number line to represent inequalities from various contextual  and mathematical situations.  I CAN graph inequalities. | **Content**  Inequality  numerical expressions algebraic expressions  evaluate  sum  term  product  factor  quantity  quotient  coefficient constant  like terms equivalent expressions variables  **Academic**  Analyze  Apply  Write  Evaluate  Fluent/Fluency  Distinguish comparisons  Flexible  Understand | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  **Graphing**  [**http://www.kutasoftware.com/FreeWorksheets/PreAlgWorksheets/Inequalities%20and%20Their%20Graphs.pdf**](http://www.kutasoftware.com/FreeWorksheets/PreAlgWorksheets/Inequalities%20and%20Their%20Graphs.pdf) | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket  Learning Log |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered** | **Learning Target** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.EE.9**  Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express  one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. | How can we apply our understanding of independent and dependent  variables to real-life scenarios?  How can we identify independent and dependent variables in the world  around us? | Independent and Dependent Variables  Function Tables  Discrete Data  Distance/Rate/Time | I CAN understand the relationship between two variables.  I CAN identify independent and dependent variables.  I CAN recognize and explain the impact on the dependent variable when the independent variable  changes. | **Content**  Independent  Dependent  Function  Discrete  Distance  Rate  Time  Change  **Academic**  Analyze  Apply  Write  Evaluate  Fluent/Fluency  Distinguish comparisons  Flexible  Understand | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  SchoolNet  **Activities**  **Interactive Functions**  <http://teams.lacoe.edu/documentation/classrooms/amy/algebra/5-6/activities/functionmachine/functionmachine5_6.html>  **Function Tables**  <http://www.ixl.com/math/grade-5/function-tables>  [http://digitalcommons.pace.edu/cgi/viewcontent.cgi?article=1003&context=middle\_math&sei-redir=1&referer=http%3A%2F%2Fwww.bing.com%2Fsearch%3Fq%3Dgrade%2B6%2Bindependent%2Band%2Bdependent%2Bvariables%26src%3DIE-SearchBox%26FORM%3DIE8SRC#search=%22grade%206%20independent%20dependent%20variables%22](http://digitalcommons.pace.edu/cgi/viewcontent.cgi?article=1003&context=middle_math&sei-redir=1&referer=http%3A%2F%2Fwww.bing.com%2Fsearch%3Fq%3Dgrade%2B6%2Bindependent%2Band%2Bdependent%2Bvariables%26src%3DIE-SearchBox%26FORM%3DIE8SRC%23search=%22grade%206%20independent%20dependent%20variables%22) | Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Constructive Response Notebook  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  Exit Ticket  Learning Log |

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| **Unit Three: Ratios and Proportional Relationships**  **The Big Idea: How can I apply ratio concepts to real-life?**  **Sixth Week Project: Re-Write a Recipe.**  **(http://www.ehow.com/info\_8214043\_middle-school-ratio-proportion-projects.html)** | | | | | | |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered (Lessons to be Taught)** | **Learning Target**  **“I CAN”** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.RP.1**  Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, “The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak.” “For every vote candidate A received, candidate C received nearly three votes” | How can I compare two quantities or measures? | Writing Ratios  Identify and describe any ratio using “For every \_\_\_\_\_ ,there are \_\_\_\_\_”  Comparing two quantities using part-to-part and part-to-whole | **I CAN** write the relationship between two quantities as a ratio.  **I CAN** compare two quantities or measures by using part-to-whole or part-to-part relationships. | **Content**  Ratio  Quantity  Part-to-  Part  Part-to-  Whole  **Academic**  Understand  Describe  Use  Solve  Compare  Recognize  Transform  Associate  Apply  Determine  Make  Find  Distinguish  Convert | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  <http://www.superkids.com/aweb/tools/math/compare/>  <http://www.webmath.com/k8numlinecomp.html>  **Activities:**  **\*The Euro and the International Debt Crisis**  <http://www.yummymath.com/2011/the-euro-and-the-international-debt-crisis/>  **\*Glowing Rectangles**  <http://www.yummymath.com/wp-content/uploads/glowing-rectangles.pdf> | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made  Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered** | **Learning Target** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.RP.2**  Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language in the context of a ratio relationship. For example, “This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is ¾ cup of flour for each cup of sugar.” “We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger.” | How can I use Unit Rate in the real-world? | Finding Unit rate- A ratio that is Part-to-one.  Writing unit rate as:  a/b and a : b |  | **Content**  Ratio  Unit rate  Part-to-one  **Academic**  Understand  Associate  Use  Context  Relate  Determine  Find | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  **Activities:**  **\*Big Bucks**  [**http://www.yummymath.com/2012/big-bucks/**](http://www.yummymath.com/2012/big-bucks/)  \***Produce, Meats and Cheeses.-**  Students will learn how to calculate with rates, using produce and deli prices in a grocery store.  **(Real-life Math ISBN 978-0-8251-6320-3)** | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made  Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered** | **Learning Target** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.RP.3 .b**  Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about  tables of equivalent ratios, tape diagrams, double number line  diagrams, or equations  **b.** Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could  be mowed in 35 hours? At what rate were lawns being mowed? | How can I use ratios and unit rates in the real-world | Finding unit rate involving unit pricing and constant speed.  Solve real-world problems about unit rate. | **I CAN** recognize the use of ratios, unit rate and multiplication in solving problems.  **I CAN recall** what I have learned about fractions and decimals. | **Content**  Unit rate  Unit pricing  Constant  Speed  **Academic**  Solve  Relate  Reason out  Find  Determine  Analyze  Recognize | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  <http://www.superkids.com/aweb/tools/math/compare/>  <http://www.webmath.com/k8numlinecomp.html>  **Activities:**  **I love Goldfish…**  **The cheese kind.**  [**http://www.yummymath.com/wp-content/uploads/2011/08/Goldfish...-cheesy.pdf**](http://www.yummymath.com/wp-content/uploads/2011/08/Goldfish...-cheesy.pdf)  **Best Deal/Best Buy?** Students are asked to come up with the current prices of products they consume at home. They will compare the unit prices of two different brands and will come up with the decision if which is the best buy. | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made  Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered** | **Learning Target** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.RP.3.a**  Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about  tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.  **a.** Make tables of equivalent ratios  relating quantities with whole number  measurements, find  missing values in the tables, and plot the pairs of values on the  Coordinate plane. Use tables to compare ratios. | How can I use ratios and unit rates in the real-world? | Determine Equivalent Ratios  Finding missing values in a table.  Plotting pairs of values in the Coordinate Plane  Comparing ratios using tables. | **I CAN** create table of equivalent ratios relating quantities with whole number measurement.  **ICAN** solve for the missing values in the tables.  **I CAN** plot pairs of values on the coordinate plane.  **I CAN** use tables to compare ratios. | **Content**  Context  Double  Number  Line  Plot  Convert  Reasoning  Unit Rate  Tape Diagram  Equivalent  Percent  Rate  **Academic**  Use  Relate  Reason out  Construct  Find  Determine  Use | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  <http://www.superkids.com/aweb/tools/math/compare/>  <http://www.webmath.com/k8numlinecomp.html>  **Activities :**  **Comparing Prices of Books..**  Students are to present their data in tables and they will use the given prices to predict values of certain number of books. Students are asked also to graph their data.  **(Real-life Math ISBN 978-0-8251-6320-3)** | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made  Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered** | **Learning Target** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.RP.3.c**  Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.  **c**. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. | How is a percent like a ratio? | Finding Percent of a Number  Finding the whole given a part and a percent. | **I CAN** use ratio to identify percents**.**  **I CAN** solve for the percent of a number.  **I CAN** determine the whole amount given a part and a percent. | **Content**  Percent  Ratio  Rate  Part  Whole  Discount  Tax  Tip  **Academic**  Find  Solve  Determine  Analyze  Relate  Reason out | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  Real-Life Math Fractions, Ratios and Rates second edition  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  **Activities:**  **Smart Buyer:** Students will gather brochures with discounted and on sale items. They will list down their wish list and find the discounted prices of the items they wanted to have.  **\*Menu Math** – Students will simulate what is going on in a restaurant. Each student is given a role to play and they will practice on tipping and sales tax. This activity is a good review on the addition, subtraction, multiplication and division of decimals.  \*Egypt and Population Pyramid  <http://yummymath.com/wp-content/uploads/2011/03/egypt-population.pdf> | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made  Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered** | **Learning Target** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.RP.3.d**  Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line, diagrams, or equations.  **d.** Use ratio reasoning to convert measurement units; manipulate and  transform units appropriately when  multiplying or dividing quantities | How can I use ratio to compare measures of two different types? | Convert measurement units from English to Metric and vice versa.  Transforming units appropriately when multiplying or dividing. | **I CAN** use ratios as conversion factors.  **I CAN** use the identity property for multiplication to convert ratio units. | **Content**  Ratio  Measurement  Conversion  Factors  Multiply  Divide  **Academic**  Use  Manipulate  Transform  Compare  Convert | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  Real-Life Math Fractions, Ratios and Rates second edition  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  **Activities**  **\*Perihelion**  [**http://www.yummymath.com/2011/perihelion/**](http://www.yummymath.com/2011/perihelion/)  **\*Rapunzel**  [**http://www.yummymath.com/2010/rapunzel/**](http://www.yummymath.com/2010/rapunzel/)  **\*A Trip To Canada –**  To use conversion of factors in switching between length and volume and temperature measures in the English and Metric Measurements.  (Real-life Math ISBN 978-0-8251-6320-3) | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made  Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |

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| **Unit Four: Geometry**  **The Big Idea: Can I connect 3-Dimensional figures to real-life?**  **Sixth Week Project: Design Your Own Dream House.** | | | | | | |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered (Lessons to be Taught)** | **Learning Target**  **“I CAN”** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.G.1**  Find the area of right  triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or  decomposing into triangles and other  shapes; apply these techniques in the context of solving real-world and mathematical problems. | How can I use area in the real-world?? | Identifying Polygons  Finding Areas of Polygons  ( Triangles and special quadrilaterals)  Decompose and Compose Polygons into Rectangles and triangles and find the Area  Solve real-world area problems. | **I CAN** solve the areas of triangles, special quadrilaterals and polygons  **I CAN** find the areas of composite figures.  **I CAN** solve problems in the real-world context. | **Content**  Area  Triangle  Right Triangle  Length  Width  Height  Isosceles  Polygon  Formula  Scalene  Equilateral  Quadrilaterals  Rectangle  Parallelogram  Trapezoid  Base  **Academic**  Compose  Decompose  Solve  Compare  Recognize  Find  Apply | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm> | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made  Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered** | **Learning Target** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.G.3**  Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems. | How can I relate the Coordinate Plane to solve real-world problems on areas? | Constructing Polygons in the Coordinate Plane.  Finding the distance between two points in the coordinate plane.  Finding the Area and Perimeter of geometric figures drawn on a coordinate plane. | **I CAN** draw polygons on the Coordinate Plane.  **I CAN** find the distance between two points on t Coordinate Plane.  **I CAN** determine the area and perimeter of geometric figures drawn on a coordinate plane. | **Content**  Polygons  Coordinates  Coordinate plane  x- axis  y-axis  Origin  Vertices  Distance  Area  Perimeter  **Academic**  Draw  Use  Find  Construct  Describe  Relate  Apply  Determine | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  <http://tulyn.com/6th-grade-math/rational-numbers>  **Activities:**  **\*Draw polygons using coordinates**  <http://learnzillion.com/lessons/1065-draw-polygons-using-given-coordinates-as-vertices>  **\*Polygons in the Coordinate Plane**  [**http://www.mathworksheetsland.com/6/34poly.html**](http://www.mathworksheetsland.com/6/34poly.html)  **\*Coordinate Plane**  [**http://pinterest.com/lauralpj/school-stuff-math-coordinate-plane/**](http://pinterest.com/lauralpj/school-stuff-math-coordinate-plane/) | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made  Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered** | **Learning Target** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.G.4**  Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems. | What strategies will I use to find the surface area of three dimensional figures using nets? | Identify the Nets of 3D figures  Finding Surface Areas | **I CAN** represent three-dimensional  figures whose nets are composed of rectangles and triangles.  **I CAN** calculate the Surface Area of three-dimensional figures. | **Content**  3-D figure  Solid  Dimension  Net  Surface area  Triangular Prism  Rectangular  Prism  Cube  Triangular  Pyramid  Rectangular  Pyramid  Face  **Academic**  Calculate  Represent  Draw  Find  Use  Apply  Relate | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  **Activities:**  \*Building Houses with Side View  <http://www.fisme.science.uu.nl/toepassingen/02015/toepassing_wisweb.en.html>  \*From 2D to 3D  <http://pbskids.org/cyberchase/activities/2d-to-3d-morphing/> | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made  Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered** | **Learning Target** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.G.2**  Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas V = l w h and V = b h to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems. | What real-life careers involve finding the volume of objects? | Finding the Volume of 3D figures. | **I CAN** derive the formula for volume using models.  **I CAN** calculate the volume of three-dimensional figures. | **Content**  Volume  3-D figures  Rectangular  Prism  Cube  Fractional edge  Formula  Length  Width  Height  Edge  **Academic**  Derive  Show  Find  Apply  Relate  Calculate | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  <http://www.superkids.com/aweb/tools/math/compare/>  **Activities:**  **\*Volume of a Cube**  [**http://www.aaamath.com/geo79\_x4.htm**](http://www.aaamath.com/geo79_x4.htm)  **\*Volume of Rectangular Prism**  [**http://www.aaamath.com/geo79\_x7.htm**](http://www.aaamath.com/geo79_x7.htm) | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made  Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |

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| **Unit Five: Statistics and Probability**  **The Big Idea: Can I Represent Data?**  **Sixth Week Project: Data All Around Us**  **(http://math7.khb3.com/handouts/pdf/ProbabilityStatistics\_entire.pdf)** | | | | | | |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered (Lessons to be Taught)** | **Learning Target**  **“I CAN”** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.SP.1**  Recognize a statistical  question as one that anticipates variability in the data related to the question and accounts for it in the answers. For example, “How old am  I?” is not a statistical question, but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages. | Why is data collected and analyzed?  How do people use data to influence others? | Statistical and Non-Statistical Question | **I CAN** differentiate between statistical questions and those that are not. | **Content**  Statistics  Data  Statistical  Question  Non- Statistical  Question  **Academic**  Describe  Compare  Recognize  Transform  Determine  Make  Distinguish | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  **Activities:**  **\*Recognize Statistical Question**  [http://www.opusmath.com/common-core standards/6.sp.1-recognize-a-statistical-question-as-one-that-anticipates-variability-in](http://www.opusmath.com/common-core%20standards/6.sp.1-recognize-a-statistical-question-as-one-that-anticipates-variability-in) | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made  Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered** | **Learning Target** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.SP.2**  Understand that a set of data collected to answer a statistical question has a distribution, which can be described by its center, spread, and overall shape. | How can we interpret the data that we collect? | Describing data in a graph by its center, spread and overall shape. | **I CAN** examine the distribution of a data set and discuss the center, spread and overall shape with dot plots, histograms and box plots. | **Content**  Data  Measure of center  Mean  Median  Graph  Dot plot  Box plot  histogram  **Academic**  Recognize  Create  Understand  Describe  Summarize  Relate  Understand  Interpret  Determine  Find  Display  Report | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  **Activities:**  **\*NFL Home Field Advantage**  <http://www.yummymath.com/2012/nfl-home-field-advantage/> | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made  Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered** | **Learning Target** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.SP.3**  Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number. | What information can we get from a set of data using the measures of center? | Finding the Mean, Median, Mode and range of a set of data or a graph. | **I CAN** analyze and interpret a set of data or graph using the mean, median, mode and range. | **Content**  Statistics  Data  Measure of  Center  Spread  Measure of  Variation  Deviation  Range  Variability  Distribution  Variation  Histogram  Quantitative  Mean  Median  Mode  **Academic**  Recognize  Create  Understand  Describe  Summarize  Relate  Understand  Interpret  Determine  Find  Display  Report | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  <http://www.superkids.com/aweb/tools/math/compare/>  **Activities:**  **\*Landmark Chart Numbers**  [**http://media.emgames.com/emgames/demosite/playdemo.html?activity=M5A006&activitytype=dcr&level=3**](http://media.emgames.com/emgames/demosite/playdemo.html?activity=M5A006&activitytype=dcr&level=3) | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made  Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered** | **Learning Target** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.SP.4**  Display numerical data in plots on a number line, including dot plots, histograms, and box plots. | How does the type of data influence the choice of graph?  When solving multi-step word problems using charts, tables, and graphs, how can you tell if the information is sufficient? | Display data using number lines, dot plots, histograms and box plots.  Determining the appropriate graph for a set of data.  Read data from graphs. | **I CAN** display data using number lines, dot plots, histograms and box plots  I CAN determine the appropriate graph for a set of data.  I CAN analyze and interpret data from graphs. | **Content**  Data  Measure of  Center  Spread  Range  Distribution  Variation  Histogram  Box Plot  Frequency  Tables  Cluster  Gap  Dot plot  Quantitative  Mean  Median  Mode  Lower extreme  Upper extreme  Lower Quartile  Upper Quartile  Outlier  **Academic**  Recognize  Create  Understand  Describe  Summarize  Relate  Understand  Interpret  Determine  Find  Display  Report | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  **Activities:**  **\*Histogram Tool**  [**http://illuminations.nctm.org/ActivityDetail.aspx?ID=78**](http://illuminations.nctm.org/ActivityDetail.aspx?ID=78)  **\*Peak of Hurricane Season**  [**http://www.yummymath.com/wp-content/uploads/hurricane2012.pdf**](http://www.yummymath.com/wp-content/uploads/hurricane2012.pdf)  **\*Season 12 American Idol**  [**http://www.yummymath.com/2013/season-12-american-idol/**](http://www.yummymath.com/2013/season-12-american-idol/)  **\*Federal deficit and**  **Federal debt in the news**  [**http://www.yummymath.com/wp-content/uploads/deficitdebt.pdf**](http://www.yummymath.com/wp-content/uploads/deficitdebt.pdf) | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |
| **Common Core Standard** | **Essential Question** | **Concept to be Covered** | **Learning Target** | **Vocabulary** | **Recommended Resources/Activities** | **Recommended**  **Assessment** |
| **6.SP.5**  Summarize numerical data sets  in relation to their context, such as by:  **a.** Reporting the number of observations.  **b**. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.  **c.** Giving quantitative measures of  center (median and/or mean) and variability (interquartile range  and/or mean absolute deviation), as well as describing any overall  pattern and any striking  deviations from the overall pattern with reference to the context in which the data were gathered.  **d.** Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered. | How can predictions be made based on data?  What kind of questions can be answered using different data displays? | Finding a missing value in a data set to produce a specific average.  Finding the Inter quartile range.  Describing the variability of the data set by determining the Mean Absolute Deviation (MAD) | **I CAN** solve for the missing value in a data set to produce a specific average  I CAN find the inter quartile range (IQR) from a data set.  I CAN determine the Mean Absolute Deviation and describe the variability of a data set. | **Content**  Data  Measure of  Center  Spread  Measure of  Variation  Deviation  Range  Variability  Distribution  Variation  Quantitative  Measures  Mean  Median  Mode  Mean Absolute  Deviation  Minimum  Maximum  Quartiles  Inter Quartiles  Equal  Distribution  Balancing  Point  **Academic**  Recognize  Create  Understand  Describe  Summarize  Relate  Understand  Interpret  Determine  Find  Display  Report | **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  Common Core Unpacking the Standards  Crosswalk  Ladders to Success  SchoolNet  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  <http://www.superkids.com/aweb/tools/math/compare/>  <http://www.webmath.com/k8numlinecomp.html>  **Activities:**  **\*Typical Super Bowl Scores 2013**  <http://www.yummymath.com/2013/typical-super-bowl-scores-2013/> | Daily Formative Assessments  Collaborative Assessments  Common  Formative  Assessments  Constructed Response  Notebook  Weekly Teacher  Made Assessments  Daily “DO NOW”  Student  Products  NCDPI Indicators  Foldable  DPI Resources  Computer  Programs |